- -- 52. An *in vitro* method of cloning a PCR product comprising:
- obtaining a PCR product comprising a first recombination site and a second recombination site which do not recombine with each other; and
- (b) combining said PCR product *in vitro* with a vector comprising a third recombination site and a fourth recombination site which do not recombine with each other, under conditions such that recombination occurs between said first and third and said second and fourth recombination sites, thereby producing a product vector.
- 53. The method of claim 52, further comprising inserting said product vector into a host cell.
 - 54. The method of claim 52, wherein said vector is an expression vector.
- 55. The method of claim 52, wherein said vector comprises at least one additional nucleic acid sequence selected from the group consisting of a selectable marker, a cloning site, a restriction site, a promoter, an operon, an origin of replication, and a gene or partial gene.
- 56. The method of claim 52, wherein said vector comprises at least one origin of replication.

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- 57. The method of claim 52, wherein said vector comprises at least one promoter.
- 58. The method of claim 52, wherein said vector comprises at least one selectable marker.
 - 59. The method of claim 52, wherein said PCR product is linear.
- 60. The method of claim 52, wherein said first, second, third or fourth recombination sites are *lox* sites or mutants thereof.
- 61. The method of claim 60, wherein said lox sites are selected from the group consisting of loxP sites and loxP511 sites.

62. The method of claim 52, wherein said first, second, third or fourth recombination sites are *att* sites or mutants thereof.

- 63. The method of claim 62, wherein said *att* sites are selected from the group consisting of *att*B sites, *att*P sites, *att*L sites and *att*R sites.
- 64. The method of claim 52, wherein said first, second, third or fourth recombination sites are selected from the group consisting of a *lox* site, an *att* site, an FRT site, and mutants thereof.

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